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APPROVED	O.G. FIG. 1
BY	CLASS
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	SUBCLASS
	29

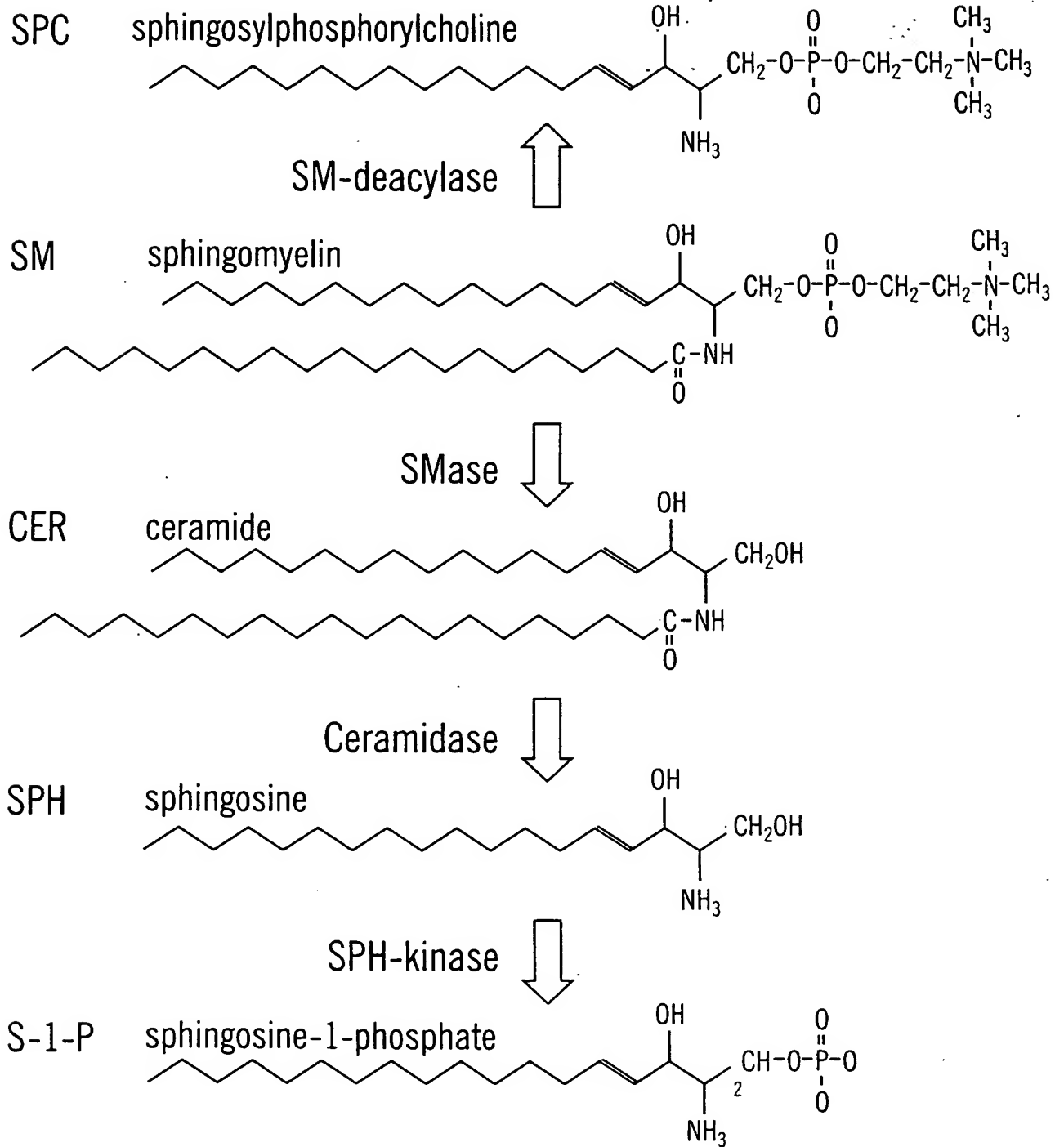


FIG. 1

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The diagram illustrates the metabolic pathways of sphingolipids, centered around the CERAMIDE molecule. The pathways are numbered 1 through 17.

Synthesis Pathway:

- 1:** S-1-P Lyase converts S-1-P to Palmitaldehyde + Ethanolamine -P.
- 2:** S-1-P Phosphatase converts S-1-P to SPH.
- 3:** SPH Kinase converts SPH to S-1-P.
- 4:** Ceramide Synthase converts SPH to CERAMIDE.
- 5:** Ceramidase converts CERAMIDE to SPH, releasing Fatty acid.
- 6:** SM synthase converts sphinganine (dihydrosphingosine) to SPHINGOMYELIN, using PtdCho and releasing DAG.
- 7:** SMase converts SPHINGOMYELIN to CERAMIDE, releasing Choline-P.
- 8:** SM deacylase converts SPHINGOMYELIN to SPC.
- 9:** Desaturase converts dihydroceramide to CERAMIDE.
- 10:** Ceramide Synthase (dihydroceramide Synthase) converts sphinganine (dihydrosphingosine) to dihydroceramide.
- 11:** NADPH-Dependent Reductase converts 3-ketosphinganine to sphinganine (dihydrosphingosine), using Fatty acyl CoA.
- 12:** Serine palmitoyl transferase converts Serine + Palmitoyl CoA to 3-ketosphinganine.

Interconversion and Degradation Pathways:

- 13:** glucosylceramide synthase converts CERAMIDE to glucosylceramide.
- 14:** cerebrosidase converts glucosylceramide to CERAMIDE.
- 15:** CERAMIDE is converted to galactosylceramide.
- 16:** CER kinase converts CERAMIDE to CER-1-P.
- 17:** CER-1-P phosphatase converts CER-1-P to CERAMIDE.

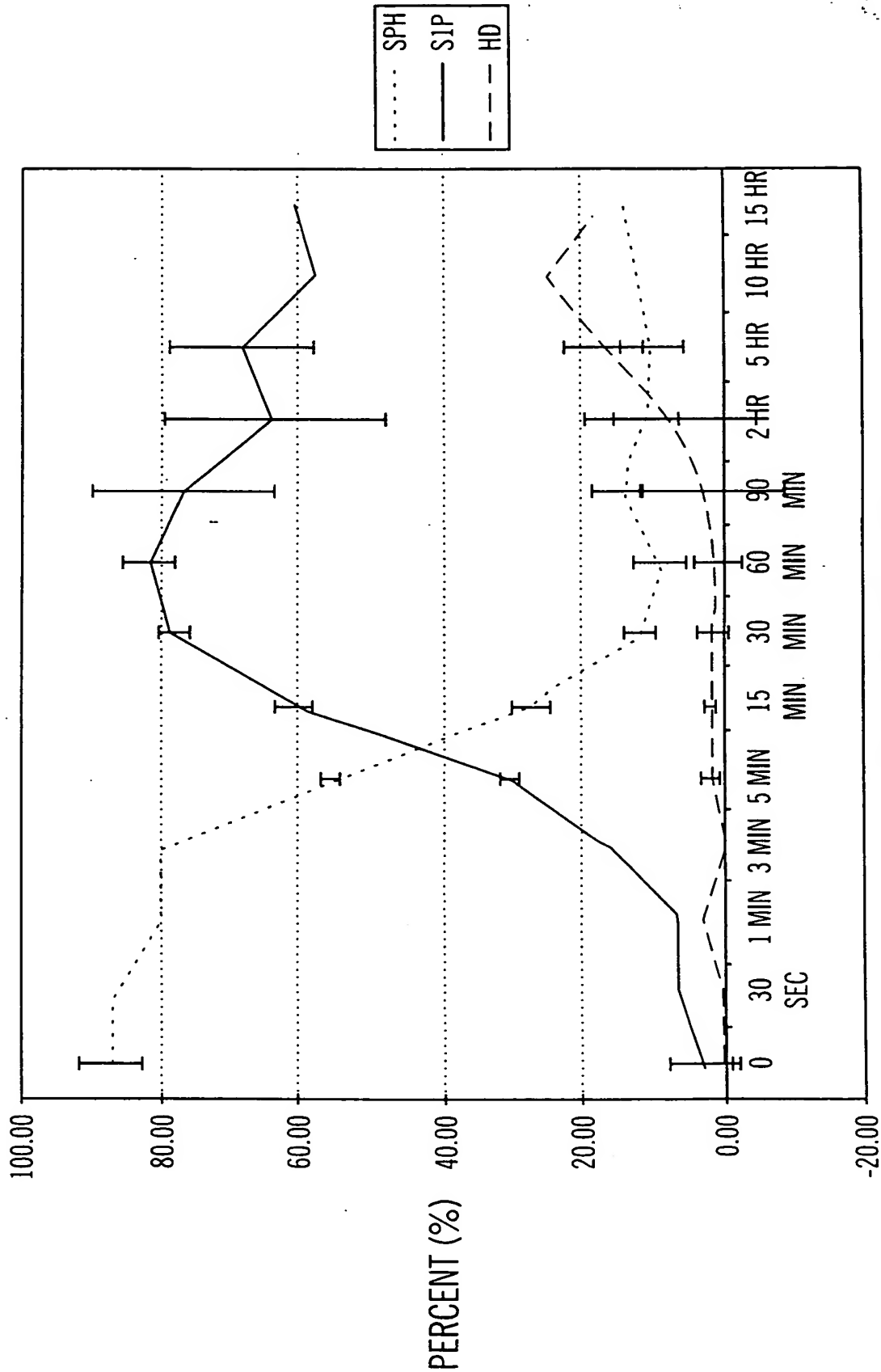
FIG. 2

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CONVERSION OF SPH TO SIP IN HUMAN WHOLE BLOOD



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APPROVED	O.G. FIG. 1
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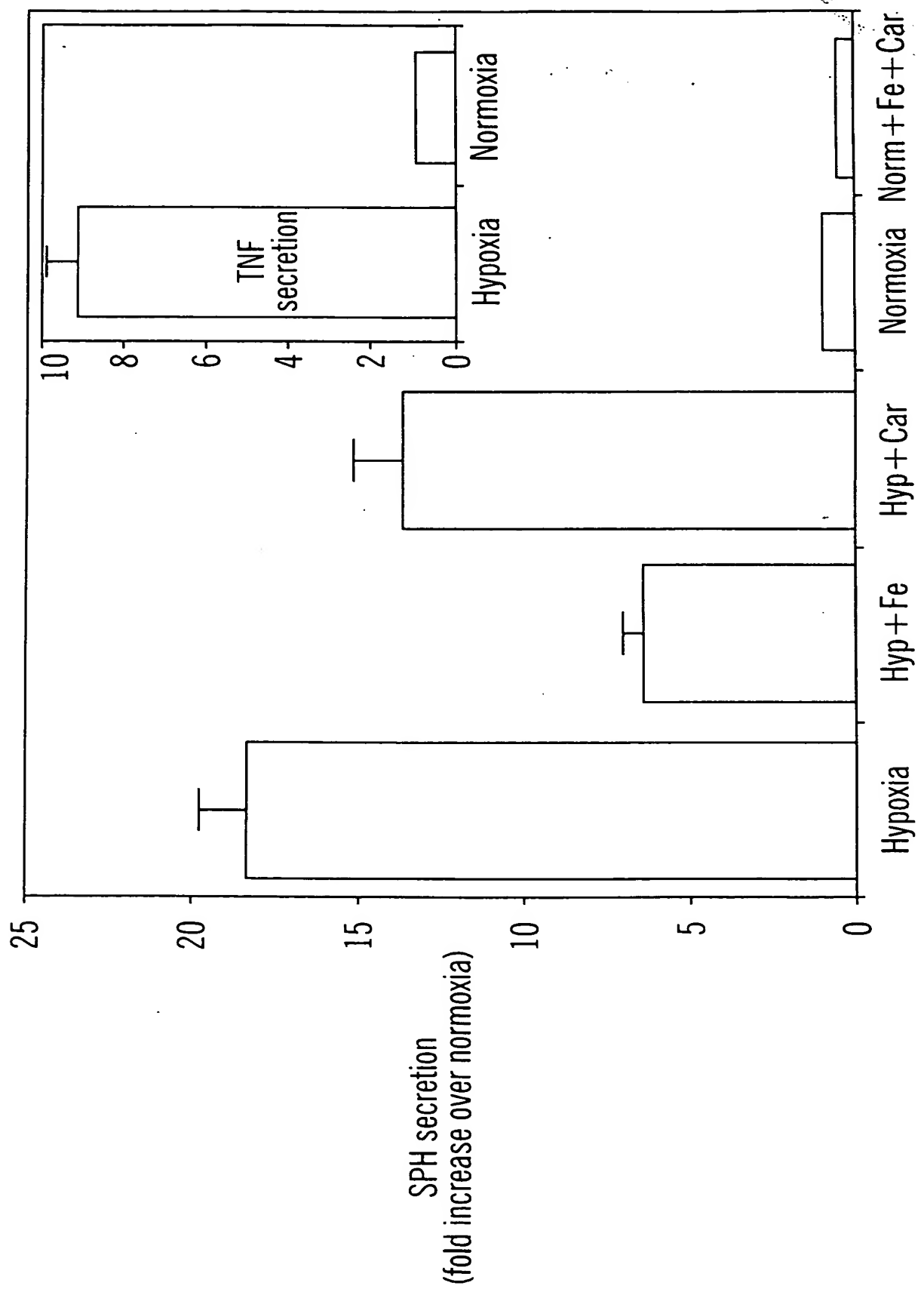


FIG. 4

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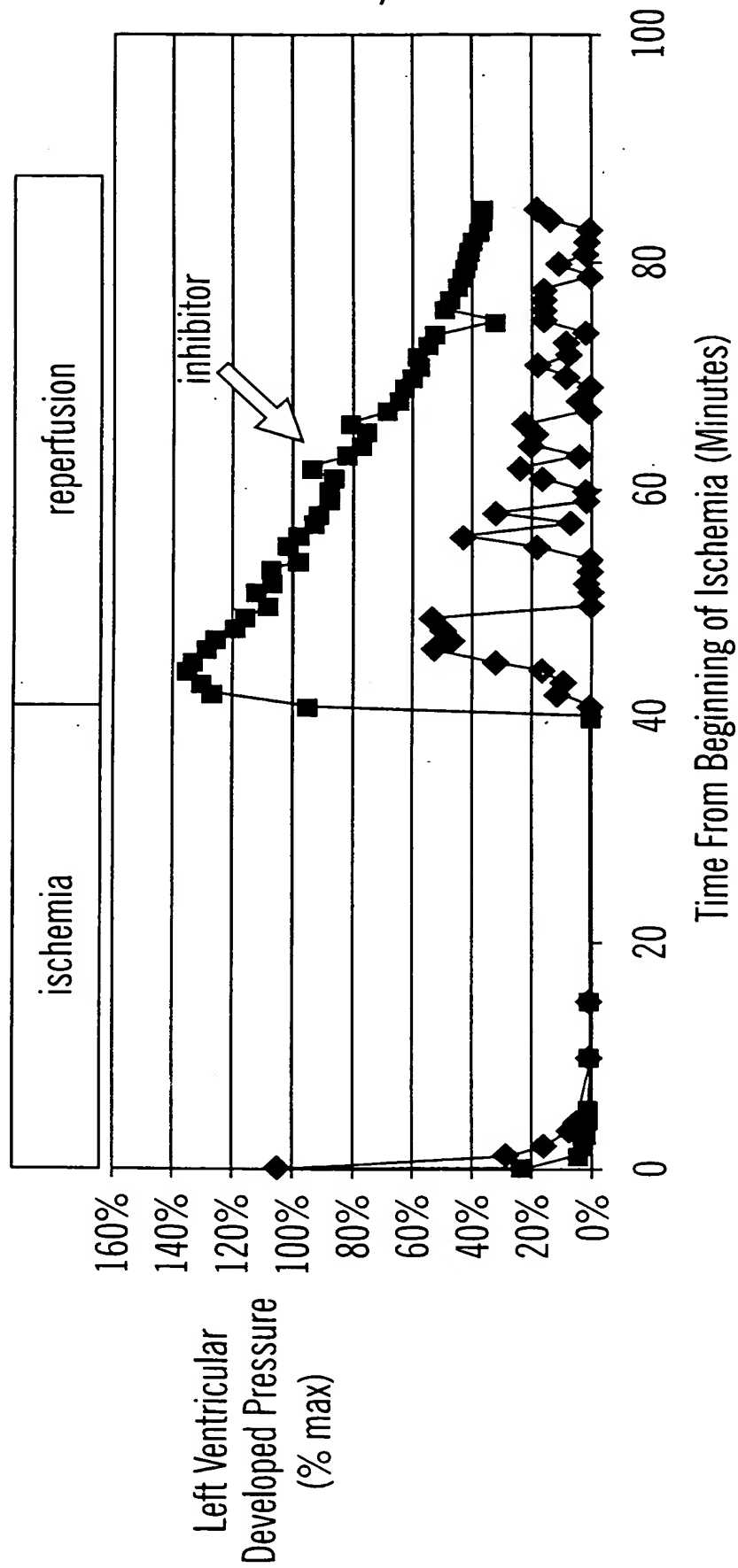


FIG. 5

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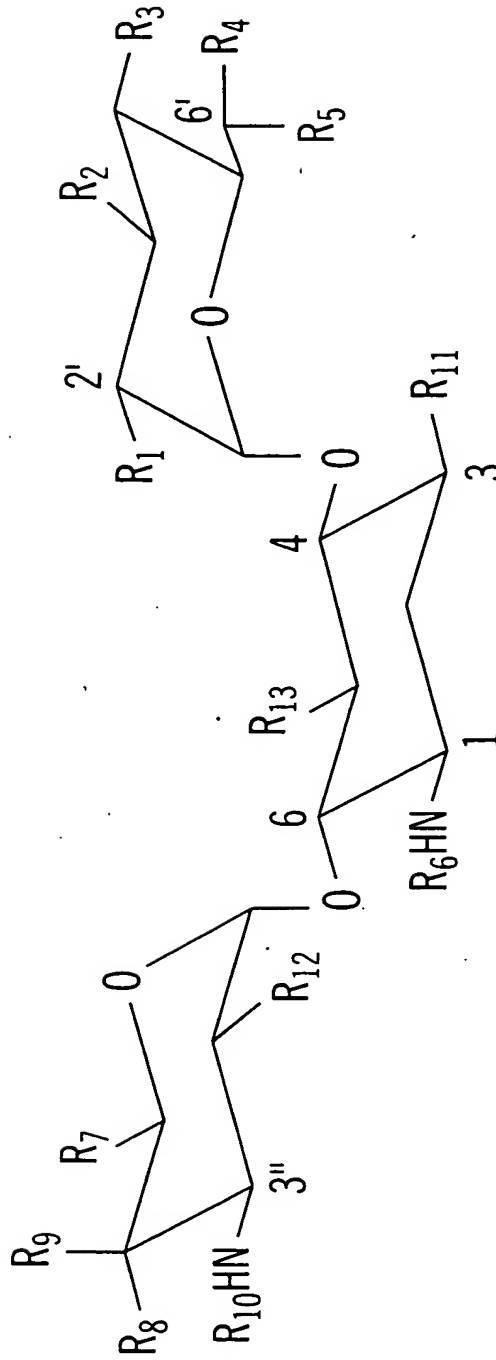


FIG. 6